ABSTRACT

Three-dimensional structures of arbitrary shape are fabricated on the surface of a substrate through a series of processing steps wherein a monolithic structure is fabricated in successive layers. A first layer of photoresist material is spun onto a substrate surface and is exposed in a desired pattern corresponding to the shape of a final structure, at a corresponding cross-sectional level in the structure. The layer is not developed after exposure; instead, a second layer of photoresist material is deposited and is also exposed in a desired pattern. Subsequent layers are spun onto the top surface of prior layers and exposed, and upon completion of the succession of layers each defining corresponding levels of the desired structure, the layers are all developed at the same time leaving the three-dimensional structure.